REMARKS

Claim Numbering

The claims have been renumbered as suggested in the Office Action.

Claim Objections

The Office action objected to the term "non-spherical" as being contradictory to the term "ball." Applicant respectfully points out that the term "ball" does not necessarily require the ball to be spherical. As such, applicant respectfully asserts that the terms "non-spherical" and "ball" are not contradictory, because a ball can be non-spherical.

The antecedent basis for the term "polymer" has been corrected as suggested by the Office Action.

Claim Rejections

The Office Action rejected renumbered claims 38, 43-44, 53-54, and 57-59 as being anticipated by U.S. Patent No. 3,214,135 to Hartmann. The Office Action applied U.S. Patent No. 5,730,420 to Tow and U.S. Patent No. 5,595,206 to Soria Vega against the remainder of the claims as allegedly suggesting that the packing disclosed by Hartmann could be made from a single piece. The Office Action also relies on *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893) for the proposition that forming in one piece an article which has formerly been formed from two pieces involves only routine skill in the art.

Amended claim 38 includes features that are not disclosed or suggested by the Hartmann Patent. For example, claim 38 recites a single piece packing that surrounds the valve element and seals directly against the valve element.

The Office Action identified the half shells 15 and 16 as the packing of Hartmann. As described below, the half shells 15 and 16 could not be made into a single piece without rendering the shell unsatisfactory for its intended purpose. Applicant respectfully points out that even if the half shells 15 and 16 could be made from a single piece, the resulting shell would not seal directly against the valve element as recited by amended claim 38. Rather, the Hartmann valve discloses sealing rings 13, 14 and elastic gaskets 21, 22 disposed between the half shells 15, 16 and the ball 5. Claim 38 includes features that are not disclosed or suggested by Hartmann or any combination of Hartmann with Tow or Soria Vega.

Applicant respectfully points out that motivation to combine either Tow or Soria Vega with Hartmann has not been established by the Office Action. The Office Action asserts that one having ordinary skill in the art would make the packing of Hartman out of a single piece as disclosed by Tow or Soria Vega to provide one less assembly step. The Office Action does not identify what this assembly step is or any evidence that it is known in the prior art that making a packing out of a single piece eliminates an assembly step. Further, even if an assembly step were allegedly eliminated, one having ordinary skill in the art would not be motivated if other assembly steps were made more difficult or new assembly steps were introduced. Rather than making the fact intensive inquiry mandated by 35 U.S.C. §103, the Office Action follows up by stating that "it has been held that forming in one piece an article which has formerly been formed from two pieces involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S.

164 (1893)." Applicant respectfully points out that *Howard v. Detroit Stove Works* turned on specific facts and no such per se rule exists (*See Ex parte John Musacchia*, Appeal No. 2004-0430, Application No. 09/174,868). The citation by the Office Action of *Howard* in this application is improper and motivation to combine either Tow or Soria Vega with Hartmann has not been established. Even if there were motivation to make the half shells of Hartmann a single piece, prima facie obviousness would not be established because the resulting shell would not seal directly against the valve element as recited by amended claim 38.

Applicant respectfully points out that a proposed modification cannot render the prior art unsatisfactory for its intended purpose. *MPEP* 2143.01 The purpose of the two half shells 15, 16 of Hartmann is to allow rigid sealing rings 13, 14 and elastic gaskets 21, 22 to be assembled in the half shells 15, 16 with the gaskets in contact with the ball 5. If the half shell 15, 16 were made a single piece as suggested by the Office Action, it would not be possible to assemble the assemble the sealing rings 13, 14 and elastic gaskets 21, 22 in the shell with the gaskets 21, 22 in contact with the ball. As such, the shell would be unsatisfactory for its intended purpose. There is no motivation to combine Tow or Soria Vega with Hartmann as asserted by the Office Action. Claim 38 is in condition for allowance.

Claim 39 depends from claim 38 and also recites that the single piece packing is dimensioned to be installed on the valve element within a room temperature range. Claim 40 depends from claim 39 and further recites that room temperature range is between 65 and 100 degrees F. The Office Action asserts that these claim elements are inherent. Applicant respectfully disagrees. None of the references teach installing a single piece packing on a valve element at room temperature. To the contrary, the single piece packing of Soria Vega is heated

above room temperature to allow installation on a valve element (col. 4, ll. 20-51) and the packing in Tow is formed around the valve element by injection molding. There is no indication in these references that the packing could be installed or formed around the valve element at room temperature. Claims 39 and 40 are in condition for allowance.

Claim 41 recites that the packing has a generally cylindrical outer surface defined by a height H and an outer diameter D4. Claim 41 further recites that the packing has a ratio H/D4 of about 0.75 to about 0.85. Claim 42 recites that the ratio H/D4 is about 0.8. Applicant respectfully points out that none of the references show or suggest a cylindrical packing with a height to diameter ratio of about 0.75 to about 0.85. Applicant respectfully requests a specific identification of the disclosure in one of the applied references that supports the assertions in the Office Action that "the packing has a generally cylindrical outer surface with a height H and an outer diameter D4 with a ratio of H/D4 is seen to be .8."

Claims 43 -62 depend from claim 38 and are allowable for at least the reasons claim 38 is allowable.

New Claims

New claims 63-66 have been added and recite features that are not shown or suggested by the cited references.

Respectfully submitted,

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